

METHOD OF USING PYRUVATE AND/OR ITS DERIVATIVES FOR THE  
TREATMENT OF CYTOKINE-MEDIATED INFLAMMATORY CONDITIONS

ABSTRACT OF THE DISCLOSURE

This invention is directed to a method of using a therapeutic composition  
5 comprising a compound of an alpha-ketoalkanoic acid (pyruvate) and/or its derivatives  
for the treatment of cytokine-mediated inflammatory conditions. The compound is an  
alpha-ketoalkanoic acid, a physiologically acceptable salt of an alpha-ketoalkanoic acid,  
an ester of an alpha-ketoalkanoic acid, or an amide of an alpha-ketoalkanoic acid. A  
component for inducing and stabilizing the enol resonance form of the ester at  
10 physiological pH values is also disclosed. The cytokine-mediated inflammatory  
conditions are mediated by, for example, an “early” (Tumor Necrosis Factor (TNF),  
interleukin-1 $\beta$  (IL-1 $\beta$ )) or “late” (high mobility group B-1 (HMGB-1)) mediator of  
inflammation. Exemplary cytokine-mediated inflammatory conditions include, but are  
not limited to, local and systemic inflammation, inflammatory bowel disease (Crohn’s  
15 disease and ulcerative colitis), rheumatoid arthritis, asthma (including status  
asthmaticus), sepsis or septic shock, also including inflammatory skin conditions, for  
example, psoriasis and eczema.